

CASE STUDY

Argonne Passes Emissions Tests with Flying Colors

Laboratory Operates On-Site Facility

The Illinois Environmental Protection Agency (IEPA) requires cars, truck, and other motor vehicles to be tested for compliance with vehicle exhaust emission standards. Fleet operators can use the services of a contract tester, or they can test and certify their own vehicles. In 1990, Argonne National Laboratory became a self-testing facility. The Vehicle Maintenance Group currently inspects about 45-60 vehicles each year. By inspecting its own fleet, Argonne saves both time and money.

State Certifications

To become an authorized self-testing facility, Argonne applied for an inspection permit. A list of testing equipment, a vehicle inventory, and a testing schedule accom-



panied the application. The IEPA performed a field audit of Argonne's testing equipment and facility to determine whether the proposed testing schedule could be met on the basis of the number of vehicles to be tested and the

equipment and inspectors available.

The IEPA also requires that inspectors complete a training course and be certified. Inspectors must also have at least four hours of training in

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operating an emission analyzer before attending the six-hour course. The course covers the following:

- · Rules and regulations,
- · Test procedures,
- Use and calibration of the analyzer,
- · Quality control,
- · Data recording, and
- · Record keeping.

Preparatory classes are held both on- and offsite; the state-required training course is held off-site.

Every two years, the facility and all inspectors must be recertified. Inspectors must repeat the training course, and each inspector is certified only for the organization by which he or she is currently employed and for the vehicles listed for that fleet. Five members of the Vehicle Maintenance

Group are currently certified inspectors.

Inspections

A new vehicle is exempt from testing for three years. Biennial testing is then required until the vehicle is eight years old, after which it must be tested annually. The IEPA mails notices when inspections are due.

The inspections consist of two parts:

 The levels of hydrocarbons, carbon monoxide, and carbon dioxide present in the exhaust at 2,500 rpm and at idle are measured and compared with current emission standards for the type and model of vehicle. The IEPA specifies the use of tachometers and nondispersive infrared exhaust-gas analyzers in emissions testing.

 Vehicles are checked for proper gas cap, catalytic converter, and fuel inlet restrictor.

When a vehicle passes the inspection,

- Argonne submits a vehicle inspection report.
- The IEPA issues an emission inspection sticker, which is affixed to the windshield.
- A copy of each report must be kept on file for two years.

If the vehicle fails the inspection,

- The inspector performs a computerized test and prints out a list of repairs needed.
- After repairs are made, the vehicle is tested again.
- Results from both the failed and the successful tests are sent to the IEPA.

Disclaimer
This information on the pollution prevention measures employed by the Vehicle Maintenance Group at Argonne National Laboratory is intended as guidance only. For further information, contact Earl Powell, Vehicle Maintenance Supervisor, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439, phone: 630-252-7096.